

Amendments to the Specification:

Please add the following new paragraph after the Title and before the first paragraph on page 1:

THIS APPLICATION IS A U.S. NATIONAL PHASE APPLICATION OF PCT INTERNATIONAL APPLICATION PCT/JP2003/012403.

Please replace the paragraph, beginning at page 5, line 14, with the following rewritten paragraph:

~~non-linear distortion compensating section~~instantaneous power calculator 102 for calculating instantaneous power 103 of transmission digital orthogonal base-band signal 101;

Please replace the paragraph, beginning at page 5, line 22, with the following rewritten paragraph:

~~instantaneous power calculator~~non-linear distortion compensating section 109 for providing transmission digital orthogonal base-band signal 101 with non-linear distortion compensation by using orthogonal non-linear distortion compensating data 108 supplied from compensation coefficient referencing section 104;

Please replace the paragraph, beginning at page 6, line 27, with the following rewritten paragraph:

An operation of the transmission device having the foregoing structure is demonstrated hereinafter. ~~Non-linear distortion compensating section~~instantaneous power calculator 102 calculates an amount of instantaneous power of a transmission signal based on transmission digital orthogonal base-band signal 101. Compensation coefficient referencing section 104 produces reference address 105 based on the amount of the instantaneous power of the transmission signal, and refers to reference table 106 to be used for compensating non-linear distortions, thereby obtaining non-linear distortion compensating data 107 having reversal characteristics to those of non-linear distortion of the transmission system, and finally outputs orthogonal non-linear distortion compensating data.

Please replace the paragraph, beginning at page 7, line 11, with the following rewritten paragraph:

~~Instantaneous power calculator~~Non-linear distortion compensating section 109 produces a complex product of base-band signal 101 and non-linear distortion compensating data 108, and outputs orthogonal base-band signal 110 undergone the non-linear distortion compensation. First orthogonal modulator 111 orthogonally modulates compensated base-band signal 110, then provides signal 110 with D/A conversion, and outputs analog modulated signal 112.